

Age-Related

It's no secret that your hair can change over time. How much hair you started out with and how quickly you lose it are both influenced by genetics.

Newborn Hair Amount

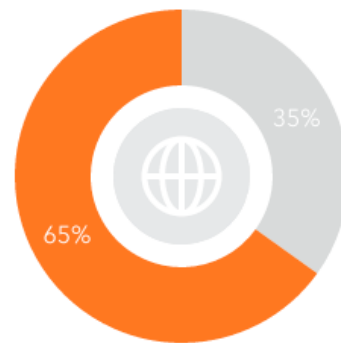
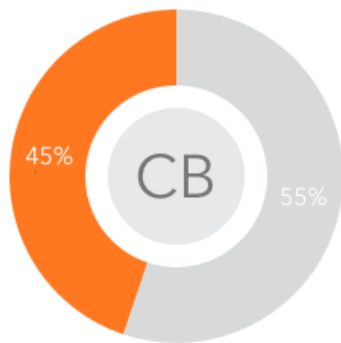
Male Hair Loss

Bald Spot

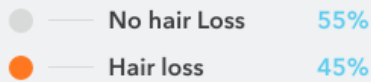
What You Can Do

You are not likely to experience hair loss before the age of 40.

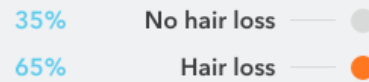
55% of male customers between the ages of 30 and 40 who are genetically similar to you have not experienced any hair loss.



Your genetic likelihood



Male European ancestry customers



This prediction best applies to customers of European descent. We analyzed data from over 30,000 customers who consented to research in order to identify genetic markers associated with male hair loss. Our prediction is based on your genotype at 19 genetic markers as well as your age.

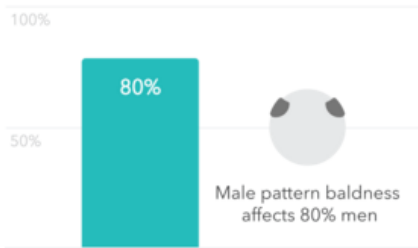
About Male Hair Loss

As most men age, their hair becomes thinner and falls out, progressively becoming more bald.



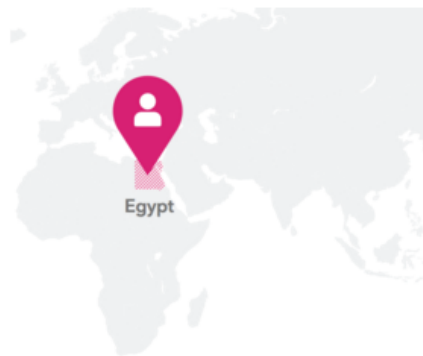
Biology

Male pattern baldness is the most common form of hair loss, affecting at least 80% of all men. This condition begins with scalp hairs becoming finer and shorter, progresses to hair thinning, and may result in complete baldness.



History

Men have been trying to treat baldness for millennia. In an ancient Egyptian medical text called the Ebers Papyrus, a proposed cure was rubbing the combined fat from lions, crocodiles, snakes, and hippopotami onto a balding head.



Other factors

Learn more about the bald truths of hair loss.



Age



Hormone levels



Genetics



Scientific Details

[Methodology](#)

[About Your Results](#)

[References](#)

We use two different methods to calculate your trait results.

Statistical Model

Most traits are influenced by many different factors, including genetics, lifestyle, and environment. Usually, a statistical model using many factors provides better predictions than looking at single factors by themselves. To develop our models, we first identify genetic markers associated with a trait using data from tens of thousands of 23andMe customers who have consented to research. Then, we use statistical methods to generate a "score" for that trait using your genotype at the relevant genetic markers as well as your age and sex. We predict your likelihood of having different versions of the trait based on the survey responses of 23andMe customers with similar scores. These predictions apply best to customers who are of the same ethnicity as the people whose data contributed to the model. The accuracy of these predictions varies from trait to trait.

[Read more about our statistical methodology](#)

Curated Model

For some traits, just a few genetic markers can strongly predict whether a person will have a particular version of the trait. For curated models, we first evaluate published scientific studies to identify genetic markers with well-established associations with the trait. Then, we look at genetic and survey data from tens of thousands of 23andMe customers who have consented to research. We estimate your likelihood of having different versions of the trait based on survey responses from customers who are genetically similar to you at those markers. These results apply best to customers who are of the same ethnicity as the people whose data contributed to the predictions.

About your Male Hair Loss result

Your result for this trait was calculated using a **statistical model**.

About the Male Hair Loss model

Created based on customers of ethnicity: European
Number of customers used to create: 30,000
Number of markers: 19
Area Under Curve (AUC): 0.774
Non-genetic factors: Age

Bin #	No hair Loss	Hair loss
1	29.61%	70.39%
2	37.76%	62.24%
3	39.88%	60.12%
4	38.67%	61.33%
5	42.90%	57.10%
6	45.92%	54.08%
7	47.13%	52.87%
8	45.62%	54.38%
9	50.76%	49.24%
10	49.55%	50.45%
11	52.27%	47.73%
12	57.10%	42.90%
13	50.45%	49.55%
14	55.15%	44.85%
15	58.79%	41.21%
16	63.64%	36.36%
17	63.64%	36.36%
18	68.48%	31.52%
19	74.24%	25.76%
20	80.91%	19.09%
Overall European	52.61%	47.39%

References

1. Eriksson N et al. (2010). "Web-based, participant-driven studies yield novel genetic associations for common traits." *PLoS Genet.* 6(6):e1000993. [↗](#)
2. Frost P. (2006). "European hair and eye color: a case of frequency-dependent sexual selection?." *Evolution and Human Behavior.* 27(2):85-103. [↗](#)
3. Gavazzoni Dias MF. (2015). "Hair cosmetics: an overview." *Int J Trichology.* 7(1):2-15. [↗](#)
4. Han J et al. (2008). "A genome-wide association study identifies novel alleles associated with hair color and skin pigmentation." *PLoS Genet.* 4(5):e1000074. [↗](#)
5. Harding RM et al. (2000). "Evidence for variable selective pressures at MC1R." *Am J Hum Genet.* 66(4):1351-61. [↗](#)
6. Healy E et al. (2001). "Functional variation of MC1R alleles from red-haired individuals." *Hum Mol Genet.* 10(21):2397-402. [↗](#)
7. Ito S and Wakamatsu K. (2011). "Diversity of human hair pigmentation as studied by chemical analysis of eumelanin and pheomelanin." *J Eur Acad Dermatol Venereol.* 25(12):1369-80. [↗](#)
8. Kostigan KA et al. (2006). "Pregnancy folklore revisited: the case of heartburn and hair." *Birth.* 33(4):311-4. [↗](#)
9. Medland SE et al. (2009). "Estimating the heritability of hair curliness in twins of European ancestry." *Twin Res Hum Genet.* 12(5):514-8. [↗](#)
10. Nogueira AC and Joekes I. (2004). "Hair color changes and protein damage caused by ultraviolet radiation." *Photochem Photobiol B, Biol.* 74(2-3):109-17. [↗](#)
11. Qi J and Garza LA. (2014). "An overview of alopecias." *Cold Spring Harb Perspect Med.* 4(3). [↗](#)
12. Schiöth HB et al. (1999). "Loss of function mutations of the human melanocortin 1 receptor are common and are associated with red hair." *Biochem Biophys Res Commun.* 260(2):488-91. [↗](#)
13. Smith R et al. (1998). "Melanocortin 1 receptor variants in an Irish population." *J Invest Dermatol.* 111(1):119-22. [↗](#)
14. Sulem P et al. (2007). "Genetic determinants of hair, eye and skin pigmentation in Europeans." *Nat Genet.* 39(12):1443-52. [↗](#)
15. Valverde P et al. (1995). "Variants of the melanocyte-stimulating hormone receptor gene are associated with red hair and fair skin in humans." *Nat Genet.* 11(3):328-30. [↗](#)